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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,940	02/22/2002	Nobuyoshi Yazawa	15311	2191

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Scully, Scott, Murphy & Presser
400 Garden City Plaza
Garden City, NY 11530

EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/081,940	Applicant(s) YAZAWA ET AL.	
	Examiner DAVID CZEKAJ	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15, 18-20 and 22-35 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 18-20 and 22-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

On page 8, applicant argues that neither reference teaches varying the position of the optical or image support member located at opposite ends of the bellows portion. While the applicant's points are understood, the examiner respectfully disagrees. The member located at opposite ends of the bellows portion is not found in the claim. What is found in the claim is the optical and imaging element are arranged to oppose each other at opposite ends of the tubular member. See for example Takahashi figure 1. There Takahashi illustrates an imaging element or CCD 71a and 71b at one end of the tubular member. Takahashi further illustrates an optical system 72a and 72b at the opposite end of the tubular member. Hence, Takahashi teaches the optical and imaging element are arranged to oppose each other at opposite ends of the tubular member. Therefore the rejection has been maintained.

On page 8, applicant argues that Chikama does not teach the bellows portion is between the optical system and imaging support member and that members at each end need distance adjustment such that they oppose each other. While the applicant's points are understood, the examiner respectfully disagrees. Takahashi discloses in figures 1-2 and 9-10, imaging elements or CCD's on one side of the tubular member and optical systems on the opposite side (as indicated above). Chikama illustrates in figures 11-14, a bellows portion located between to opposing members. Hence, the combination of Takahashi with Chikama teach the bellows portion is between the optical system and imaging support member and that members at each end need distance

adjustment such that they oppose each other. Therefore the rejection has been maintained.

On page 8, applicant argues that Chikama fails to disclose movement in the X, Y, and Z directions. While the applicant's points are understood, the examiner respectfully disagrees. See for example Chikama column 8, lines 32-36. There Chikama discloses that the bellows can be bent in all directions. Further, the examiner notes that when in use, the forward, backward, up, down, left, and right movements would constitute movement in three dimensions. Also when bending the scope 90 degrees apart, the movement of the scope between the X and Y axis's would constitute a Z directional movement. Therefore the rejection has been maintained.

On page 11, applicant argues that the references fail to disclose the optical support member being hermetically joined to the first end and the imaging element support member being hermetically joined to the second end thereby air tightly sealing the inner space. While the applicant's points are understood, the examiner respectfully disagrees. Hermetically joined, as understood by the examiner, indicates a seal that maintains an airtight space. Takahashi illustrates in figures 1-2 and 9-10 an airtight seal for the endoscope. While Takahashi fails to explicitly disclose the airtight seal, the examiner notes the seal must be airtight in order to keep outside influences (such as water, blood, and pollutants), from ruining the internal components of the endoscope. Therefore the rejection has been maintained.

On page 12, applicant argues that Takahashi fails to disclose connecting the imaging section to the optical section. While the applicant's points are understood, the

examiner respectfully disagrees. Connecting the imaging section to the optical section is not found in the claim. What is found in the claim is the imaging and optical sections in which Takahashi discloses in figures 1-2 and 9-10. Therefore the rejection has been maintained.

On page 12, applicant argues that Takahashi in view of Chikama fail to teach arranging the optical and image support members at opposite ends of the bellows portion and adjusting the positions thereof to oppose each other using the deformation of the inner space. While the applicant's points are understood, the examiner respectfully disagrees. See the examiners comments listed above with respect to the current arguments.

On page 12, applicant argues that the references fail to disclose the imaging element frame member being hermetically joined to the tubular member. While the applicant's points are understood, the examiner respectfully disagrees. See the examiners comments above with respect to the current arguments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 18-20 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (5776049) in view of Chikama (5520222).

Regarding claim 18, Takahashi discloses an apparatus that relates to a stereo endoscope (Takahashi: column 1, lines 9-11). This apparatus comprises “an optical system including at least one optical lens for obtaining an optical image of a subject” (Takahashi: figure 2a, wherein the optical system is the objective optical system), “an optical system support member” (Takahashi: figure 2A, wherein the optical system support member is the optical system driving means), “an imaging element for capturing an optical image” (Takahashi: figure 2A, wherein the imaging element is the CCD which captures the image of the subject), “an imaging element support member” (Takahashi: figure 2A, wherein the support member is the CCD driving means), and “a tubular member comprising a first and second end, defining an innerspace extending between the first and second end, the optical system being hermetically joined to the first end the imaging element being joined to the second end” (Takahashi: figure 10a, wherein the tubular member is shown). Takahashi further discloses “relative movements of the optical system and the imaging support member in a direction along an optical axis of the optical system and in a direction perpendicular to the optical axis of the optical system” (Takahashi: figure 2A, wherein the movements are indicated by the left, right, up, and down arrows) and “the at least one optical lens and imaging element are arranged to oppose each other at opposite ends of the tubular member in an airtight structure” (Takahashi: figures 2A and 9-10). However, this apparatus lacks the bellows portion and adjustment mechanism as claimed. Chikama teaches that prior art endoscope systems limit the diameter of the fiber bundles and has dead space (Chikama: column 1, lines 45-55). To help alleviate this problem, Chikama discloses

an apparatus comprising “a bellows portion between the first and second ends of the tube adapted for movement” (Chikama: figures 11-14; column 9, lines 5-11), and “an adjustment mechanism for adjusting relative positions of the support members in three dimensions, the dimensions being in a direction orthogonal to the optical axis, along the optical axis and a tilt direction to the optical axis” (Chikama: column 9, lines 5-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Takahashi and add the bellows and adjustment mechanisms taught by Chikama in order to obtain an apparatus that can provide a wide variety of different movements and help eliminate dead space.

Regarding claim 19, Takahashi discloses “an optical system fixing portion for fixing the optical system and frame member defining an inner space in which the optical system fixing portion is located, the frame member being joined to the tubular member” (Takahashi: figure 10A, wherein the optical system is fixed or joined to the tubular member).

Regarding claim 20, Takahashi discloses “an imaging element fixing portion for fixing the imaging element and frame member defining an inner space in which the fixing portion is located” (Takahashi: figures 4-5).

Regarding claims 22-23 and 25-26, Takahashi discloses “an adjusting mechanism for moving the optical system and imaging system relative to each other” (Takahashi: figures 2A, 4, 5, column 7, lines 17-29, wherein the adjusting mechanism is the driving means).

Regarding claim 24, Takahashi in view of Chikama disclose “an adjusting frame member” (Chikama: column 9, lines 5-11) such that “the optical system and imaging system move relative to each other” (Takahashi: figures 2A, 4, 5, column 7, lines 17-29).

Regarding claim 27, note the examiners rejection for claims 19 and 25.

Regarding claim 28, note the examiners rejection for claims 20 and 26.

2. Claims 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (5776049)) in view of Chikama (5520222) in further view of MacKinnon et al. (6110106), (hereinafter referred to as “MacKinnon”).

Regarding claims 29 and 34, note the examiners rejection for claim 18, and in addition, claims 29 and 34 differ from claim 18 in that claims 29 and 34 further require a filter unit. MacKinnon teaches that prior art imaging systems are bulky systems and have a limited dynamic range (MacKinnon: column 2, lines 8-15). To help alleviate this problem MacKinnon discloses a filter unit for selecting one of a plurality of observation states” (MacKinnon: figures 4A and 4C, wherein the filter unit is the filter 18).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the filter unit in order to more accurately adjust the amount of light within the apparatus.

Regarding claims 30-32, although not disclosed, it would have been obvious for the observation states to include normal light, enlarged, and fluorescent light (Official Notice). Doing so would have been obvious in order to be able to use the apparatus under a variety of conditions.

Regarding claim 33, MacKinnon discloses “the filter unit defines a plurality of openings, each of the openings comprising a lens” (MacKinnon: column 20, lines 26-28).

Regarding claim 35, note the examiners rejection for claim 18, and in addition, MacKinnon discloses “the filter unit defines a plurality of openings, the endoscope apparatus further comprises a filter unit moving mechanism to move the filter unit” (MacKinnon: column 20, lines 14-20, wherein the moving mechanism is the knobs).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID CZEKAJ whose telephone number is (571)272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dave Czekaj/
Primary Examiner, Art Unit 2621